

CLAIM AMENDMENTS

1. - 8. (Canceled)

9. (Currently amended) A process for microbial leaching of a sulfidic material, the process comprises the steps of:

a) preparing an aqueous leaching fluid consisting of

at least one sulfur-containing amino acid selected from the group consisting of cysteine, methionine, homocysteine, and and/or amides and esters, thereof, and optionally a buffer one or more salts;

~~optionally, bacteria of the genus *Thiobacillus*,~~

b) contacting said fluid with the sulfidic material for a length of time sufficient to achieve leaching,

wherein bacteria of the genus *Thiobacillus* are either a component of the aqueous leaching fluid of step (a) or, the bacteria are added to a discharging fluid, wherein said discharging fluid comprises the aqueous leaching fluid resulting from the performance of step (b).

10. (Previously presented) The process of claim 9 wherein the leaching fluid includes the bacteria.

11. (Canceled)

12. (Previously presented) The process of claim 9 wherein the bacteria are added to the discharging fluid.

13. (Previously presented) The process of claim 9 wherein, the total concentration of the at least one sulfur-containing amino acid ~~or amide or ester derivatives thereof,~~ is equal to or less than  $8 \times 10^{-3}$  M.

14. (Previously presented) The process of claim 9 wherein the pH of the leaching fluid is between 1 and 4.
15. (Previously presented) The process of claim 14, wherein the pH of the leaching fluid is between 1.5 to 2.
16. (Previously presented) The process of claim 9, wherein the bacteria are *Thiobacillus ferrooxidans*.
17. (Previously presented) The process of claim 9, wherein the sulfidic material comprises one or more sulfide ores.
18. (Previously presented) The process of claim 9, wherein the sulfidic material is pyrite.
19. (Currently amended) The process of claim 9, wherein the at least one sulfur-containing amino acid is an amide, an ester, or mixture thereof. aqueous leaching fluid consists of a mixture of sulfur-containing amino acids or their amides and esters, the sulfur-containing amino acids being selected from the group consisting of cysteine, methionine, homocysteine, and/or amides and esters thereof, and optionally a buffer.
20. (Canceled)
21. (Currently amended) A process for microbial leaching of a sulfidic material, wherein the process comprises the steps of:
  - a) preparing an aqueous leaching fluid consisting of at least one sulfur-containing amino acid selected from the group consisting of cysteine, methionine, homocysteine, and and/or amides and esters, thereof, bacteria of the genus *Thiobacillus*, and optionally one or more salts; and
  - b) contacting said aqueous leaching fluid with the sulfidic material for a period of time sufficient to achieve leaching.
22. (New) The process of claim 9, wherein the leaching fluid consists of at least one amide or ester of a sulfur containing amino acid selected from the group of methionine, cysteine, and homocysteine, and optionally, a buffer.

23. (New) The process of claim 21, wherein the total concentration of the at least one sulfur-containing amino acid or the amide or ester thereof, is equal to or less than  $8 \times 10^4$  M.
24. (New) The process of claim 21, wherein the leaching fluid consists of at least one amide or ester of a sulfur containing amino acid selected from the group of methionine, cysteine, and homocysteine.